P8445A

User's Manual

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Introduction

Welcome to Physics 8445A.

This room has been specifically built to facilitate collaboration between multiple groups at multiple sites. It has many specialized tools, software and equipment to help with this task. This instruction manual will hopefully assist you in fully utilizing all of this room's abilities.

This manual is set up to be as simple and easy to follow as possible. To accomplish this, the following icons will be used to indicate special areas that may be of interest to you.

Indicates that a user action is required to accomplish a task.

Indicates the computer's response.

Indicates a hint, tip or general information .

Indicates a warning.

Getting Started

The Physics room is controlled by a Crestron touch screen control panel. This control panel is located on top of the rack in the back corner of the room. All room functions are controlled by the Crestron control panel, you should not need to use any of the remote controls or manipulate any of the hardware in the rack directly.

The Crestron touch panel goes to sleep to conserve power. If the screen is black simply touch the screen to wake it up.

Turning On the Room

Graphic 1: Crestron start screen

To start up the room, simply touch the *Start System* button on the Crestron contorl panel.

When the system starts you should hear the projector fans start and the Sony logo on the projector will light up. The Windows computer display will be shown on the projector and the Display Control screen (See Graphic 2)will be displayed on the Crestron touch panel.

Graphic 2: Display control screen

The system will then be ready for you to perform one of the three main functions of the room, using the computers, teleconferencing, or video conferencing. You can switch between these three main room usage scenarios by pressing one of the buttons on the left hand side of the Display Control screen on the Crestron control panel.

If the Crestron control panel is not at the **Start System** *screen you can press the* **Room Off** *button at the bottom of the Crestron panel in order to return to reach this state*

Turning Off the Room

To turn off the room, simply touch the *System Off* button on the Crestron contorl panel. When the room shuts off the system will ask you to confirm whether you want to turn the system off or not. Choose yes if you are finished using the room.

The projectors take a few minutes to cool down and can not be restarted until they are cool. Thus, if you turn off the room you can not immediately start the system again. If you need to switch room modes (computer use, tele-conference, or video-conference) use the buttons on the left of the screen not the *System Off* button.

Using the Computers

Using the Windows and Linux Computers

There are two rack mounted computers available for general use in P8445A. One is running Windows XP, the other Linux.

To use the computers:

1. **Ensure that the room is turned on (see above).**
2. **Press the Display button on the left hand column of buttons on the Crestron control panel. This will allow you to control which computer display goes to which projector.**
3. **On the Crestron control panel press a computer video source button (Windows 1, Windows 2, Laptop 1, Laptop 2, Linux 1, Linux 2, or HDMI Laptop) to select which video source you would like to display on each of the projectors (See Graphic 3).**

Graphic 3: Computer display selection on the Crestron panel.

Using the Mouse and Keyboard

There is a single wireless computer keyboard and mouse that is used to control both computers in the room. A Keyboard/Video/Mouse (KVM) switch is used to choose which computer the keyboard and mouse are controlling (see Graphic 4). To choose which computer the KVM is controlling, press one of the two buttons on the top of the KVM switch. Computer 1 is the Windows computer and Computer 2 is the Linux Computer.

Graphic 4: The KVM Switch in P8445a

When you first switch computers if the login screen doesn't appear, the computer may have turned off the screen due to inactivity. To reactivate the screen, try moving the mouse.

To switch between Linux and Windows:

1. **Click either Button 1 (Windows) or Button 2 (Linux) on the KVM switch.**
2. **If the computer does not respond, try moving the mouse.**

Logging In

Once you have the Windows or Linux login screen projected onto the screen, you should be able to login and use the computers as normal.

The username and password for local accounts on either Linux or Windows is: Login = p8445a, Password = p8445b

Adjusting the Audio

The audio in the room can be controlled through the Crestron control panel.

To raise or lower the audio levels for one of the computers press the up or down arrows near the audio level meter at the bottom of the Crestron control panel (See Graphic 3).

Controlling the Cameras

The Windows computer is connected to the two pan-tilt-zoom cameras at the front of the room. These can be controlled by the Crestron control panel.

To control the cameras press the *Camera Control* button in the bottom left corner of the Crestron control panel. Refer to the camera section below on details about camera control (See Graphic 3).

Using A Laptop Computer

Using a laptop computer in P8445A is as simple as plugging one of the available video cables on the table into your laptop.

The cables are labelled as Laptop 1, Laptop 2, or HDMI. Once the cable is plugged in to your laptop, use the Crestron control panel to display the video source on one of the projectors.

To Use a Laptop Computer:

1. **Plug one of the available table video cables into your laptop**
2. **Press the appropriate display button on the Crestron control panel to send the laptop video to one of the projectors.**

The projectors are capable of handling a wide array of resolutions and refresh rates; however, if you are having problems, try switching your laptop to 1024x768 resolution at 60Hz.

Depending on your laptop make and model, there may be a special key combination required to activate the auxiliary output. On many systems, this is the Function-F7 key combination, but please consult your owners manual.

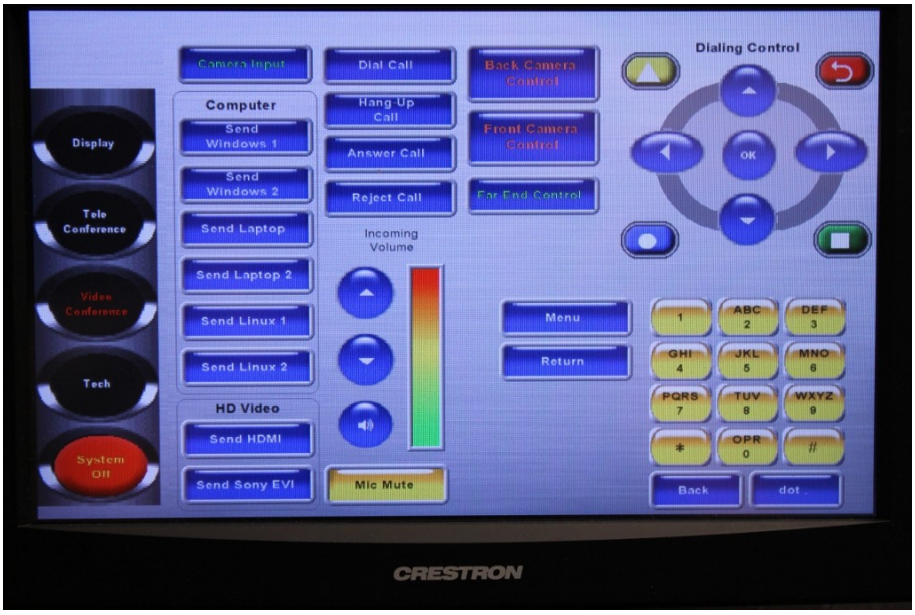
H323 Video Conferencing

P8445A can also be used for H323 conferencing. This section of the manual provides basic instructions on how to get started with using the P8445a Lifesize Room 200 video conferencing system. For more information please refer to the Lifesize manual on line at www.lifesize.com.

Video conferencing is controlled using the Crestron control panel Video Conferencing page. This page has buttons which allow control of all aspects of the H323 unit, including dialling, camera zoom, camera pan, volume control and microphone mute (See Graphic 5).

To go to the Video Conference page on the Crestron control panel simply click the *Video Conference* button on the left hand side of the control panel. You should see the Lifesize displays on the projectors.

*The Lifesize HD H323 unit may be asleep (the projectors will not display any output) if it has not been used recently. In order to wake up the unit press the **OK** button on the Crestron control panel.*

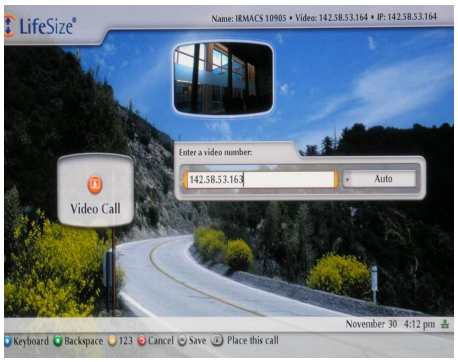


Graphic 5: Crestron Video Conference control page.

Making a Video Conference Call

To Make a call using the Lifesize H323 Unit:

1. **Use the arrow keys so that the "Video Call" button is highlighted on the projector screen and press the OK button.**
2. **Enter the IP address of the party you would like to call using the number pad on the Creston control panel – To enter 'dots' in the IP address, press the * key on the control panel.**



Graphic 6: Lifesize IP dialing screen

3. **When finished entering the IP number, press the OK button.**
4. **To connect to the site, press the "Dial Call" button.**
5. **Once connected, adjust volume and cameras to suit using the Crestron control panel.**

Using the directory to make calls

If a site has been saved in the directory, you can use the directory to connect to the site quickly.

To make a directory connection using the Lifesize H323 Unit:

1. **Press the Yellow Directory button on the Crestron control panel to access the directory screen.**
2. **Scroll through the sites on the projector screen using the arrow buttons on the Crestron control panel until the site you want to connect to is highlighted. You can use the alphabetic tabs if there are many sites in the directory.**
3. **Once the desired site is selected press the OK button to make the connection.**

Disconnecting From a Call

To disconnect an H323 call:

1. Press the "Hang Up Call" button on the Crestron control panel.

Muting Your Microphone

During the call, you can mute your microphone in one of three ways. You can mute an individual microphone by pressing the mute button on the microphone. You can also mute all the wireless microphones by pressing the mute button on the microphone base station.

To mute the microphone on the H323 unit directly:

1. **Press the "Mic Mute" button on the Crestron control panel.**

2. **To unmute the microphone press the "Mic Mute" button again.**

Camera Control

There are two cameras that work with the H323 unit, the Lifesize camera at the rear of the room and the Sony HD camera at the front left of the room.

To select the camera you want to send to the remote site:
1. **Press the "Camera Input" button on the Crestron control panel (See Graphic 5). The camera inputs available should display on the projector screen.**
2. **Use the arrows on the Crestron control panel to choose either the "Front Camera" (the Sony HD camera) or the "Back Camera" (the Lifesize HD camera).**

It is possible to pan, tilt, and zoom both cameras. Camera control is performed through the Crestron control panel.

To control the "Front Camera":
1. **Ensure that you are indeed using the front camera (see above).**
2. **Press the "Front Camera Control" button on the Crestron control panel (See Graphic 5). This will display the camera control screen.**
3. **Press the "Left Camera (HD)" button on the Crestron control panel. This will bring up the camera control screen.**
4. **Use the buttons on the Crestron screen to choose presets, pan, tilt, and zoom the camera.**
5. **To return to the video conferencing screen press the "Video Conference" button on the left hand column of the screen.**

To control the "Back Camera":
1. **Ensure that you are indeed using the front camera (see above).**
2. **Press the "Back Camera Control" button on the Crestron control panel (See Graphic 5). This will display a camera control screen.**
3. **Use the buttons on the Crestron screen to choose presets, pan, tilt, and zoom the camera.**
4. **To return to the video conferencing screen press the "Return" button on the Crestron control panel.**

Sending a Computer Display to the Remote Site

It is possible to send the output of any of the computers in the room to the remote site as a data channel.

To send a computer screen to the remote site:
1. **Press one of the Computer buttons (e.g. "Send Windows 1") to send that computer video to the remote site (See Graphic 5).**

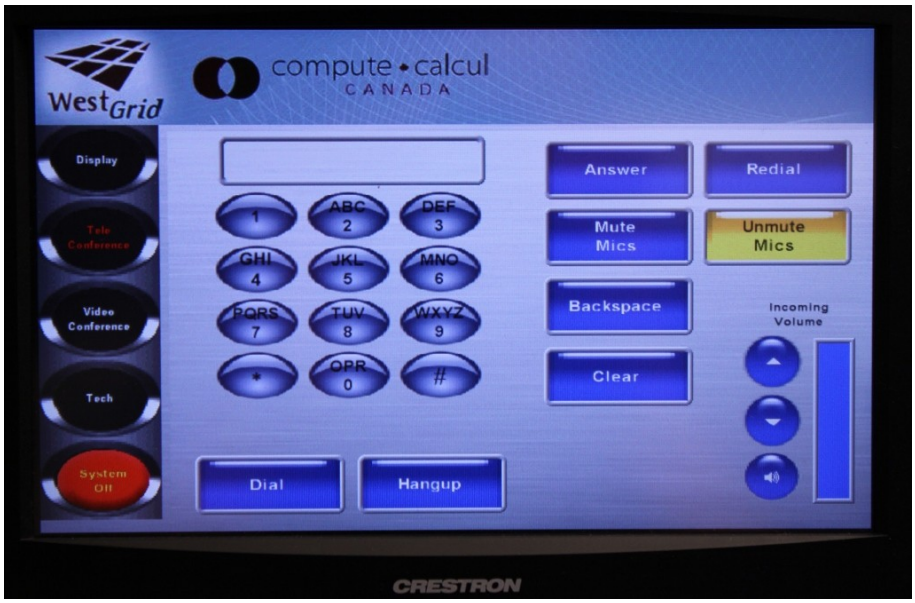
More Information

There is a lot of useful information and help available on the Lifesize web site. For more detailed information on how to use the Lifesize Room 200 H323 unit, please refer to the Lifesize web site at www.lifesize.com.

Teleconferencing

P8445A has advanced audio capabilities including the ability to make telephone calls using the built in microphones and speakers. In this way, many people within the room can participate in a phone call. Telephone calls are managed using the Crestron control panel telephone page.

To go to this page on the Crestron control panel simple click the *Teleconference* button on the left hand side of the Crestron control panel.



Graphic 7: Crestron TeleConference control page

The Telephone Number for P8445A is: 778-782-4407

To Make Outbound Telephone Calls

1. **Use the keypad on the Crestron control panel (See Graphic 7) to enter the phone number you want to call.**
2. **Press the "Dial" button on the Crestron control panel.**
3. **Adjust the volume as desired using the volume buttons on the Crestron control panel.**

In order to dial an outside line it is necessary to dial 9 before the number. Dialing internal SFU numbers in the 778-782 exchanged can be shortened to 2-XXXX where XXXX is the local you want to call.

You can also receive telephone calls and connect to the room audio system.

To Recieve Inbound Telephone Calls:

1. **When the phone rings press the "Awnser" button on the Crestron control panel (See Graphic 7).**

To control the audio during a teleconference:

1. **Press the "Mute Mics" button on the Crestron control panel to mute the microphones (See Graphic 7).**
2. **Press the "Unmute Mics" button on the Crestron control panel to un-mute the microphones.**
3. **Press the volume control buttons on the Creston control panel to raise and lower the volume.**

Using the Mics and Audio

Using the Microphones

P8445a has three wireless microphones. All three microphones can be used as tabletop microphones. They can be spread around the room as appropriate for the audience. One microphone will work quite well for approximately three people. One of the microphones can also be used as a lapel microphone.

Graphic 8: Wireless microphone base station

The microphones are located in a base charging unit on the main equipment rack in the room (see Graphic 8). The microphones are configured to work with most of the devices in the room that take audio input, including the Windows and Linux computers, the Lifesize H323 video conferencing unit, and the telephone. You do not need to do anything special to use these devices.

To use one of the microphones, simply remove it from the base station, press the mute button on the microphone (the microphones are muted by default when removed from the base station), and place the microphone on the table. If the light on the microphone is blinking green then the microphone is on. If the microphone LED is blinking red, then it is muted.

Note that there is also a mute button on the base station, and if the mute on the base station is on, the mute buttons on the individual microphones will not work. There is an LED on the base station that indicates whether or not the base station mute is on or off. If it is on you first have to press the mute button on the microphone base station and then press the mute button on the microphone.

When ever you are finished with using the microphones, please replace them in the charging unit so they are charged for the next user.

Adjusting the Audio Levels

P8445A is equipped with advanced audio controls and echo cancellation. In general, the audio from all of the devices and conferencing units will work without any adjustment at all.

If it is necessary to adjust the volume this should be done by using the volume control buttons on the Crestron control panel. See the individual sections for computer, teleconferencing, and videoconferencing usage for more information about audio in these cases.

To Adjust The Volume of the Room Audio System:

1. **Adjust the Volume control arrows on the Crestron control panel.**

Computer Networking

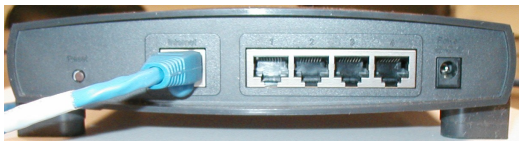
For general use, both installed computers are connected directly to the Internet and require no further setup or configuration. For users bringing in their own laptops, however, both wired and wireless network access is available in P8445. Either will use DHCP to give you an IP address that is capable of accessing the Internet.

Wired Network Access

The Cisco router located on the table will provide wired network access.

The first step is to set up your laptop to properly use DHCP for networking configuration. These settings are usually in the Networking section of either the Control Panel or System Settings section. Once configured simply plug in your computer using one of the wired network cables on the table.

To obtain network access via the (wired) router on the table:



1. **Make sure network settings on your laptop are set to automatically obtain network configuration via DHCP including DNS.**
2. **Plug a network cable into one of the available open slots on the back of the router**
3. **Plug the other end of the cable into the network interface connection on your laptop**
4. **(Possibly Required) Restart the networking on your laptop.**

As noted, it may be necessary to restart the networking on your computer to get your computer to recognize the new network connection. Check your owner's manual and/or operating system documentation for more information.

Wireless Network Access

P8445A is also equipped with a wireless router which will allow wireless connection to the Internet. Since wireless setup is specific to particular devices and operating systems, you will have to check with your particular documentation for setting up your own device / laptop.

To obtain network access via the wireless router:

1. **Properly configure your laptop for wireless – the settings are:**

ESSID: **p8445a**
channel: **6**
mode: **Open**
WEP Key: **westgridrules (128 bit Shared Ascii)**

If you are using RedHat Linux, you may be able to issue the command:

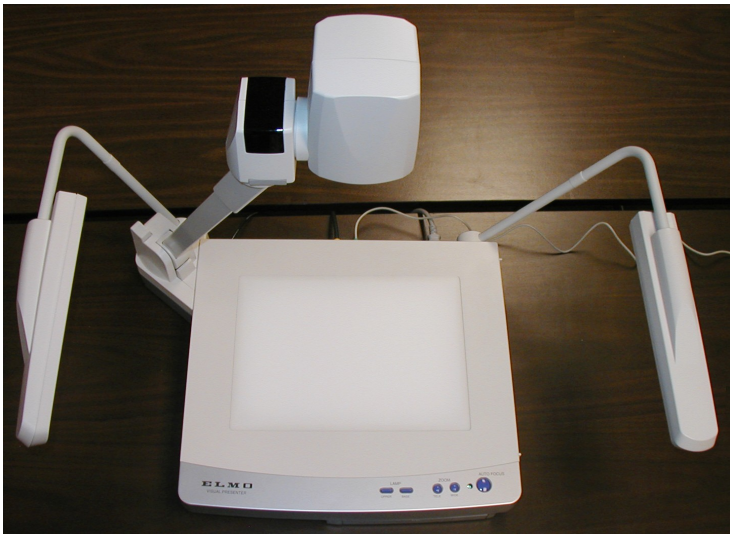
```
iwconfig eth1 essid p8445a channel 6 key s:westgridrules
```

Remember to change 'eth1' to the interface number your wireless interface has been assigned.

Other Stuff

The Elmo Presenter

The Elmo Presenter is useful for displaying documents or items to people both within the room and externally to remote collaborators. This section will describe how to display documents and items using the Elmo Presenter.



Graphic 9: Elmo Presenter

Using the Elmo Presenter

The Elmo Presenter works much like an overhead projector; however, the image is displayed using video. It can also be used as a document camera for displaying non-transparent items and papers, etc. The Elmo presenter can be used to output both Analog RGB video (a normal HD 15 computer cable) or analog composite video. Because analog RGB video is higher quality, it is recommended that you use this to display the Elmo Presenter on one of the projectors.

To use the Elmo Presenter:

1. **Turn the Elmo on using the Power Switch located on the back of the unit.**
2. **Select which lights you would like to use on the Elmo (either back light, side lights or neither depending on what you are trying to display)**
1. **Plug one of the two available table input plugs (Laptop1 or Laptop2) into the RGB Output plug on the Elmo.**
2. **Use the Crestron control panel to ensure that the chosen Laptop video source is displayed on one of the projectors by selecting the appropriate laptop button.**

There are other options (including zoom, focus, etc) that are available – check the Elmo documentation for more information.

Remotely Accessing the Elmo

The Elmo Presenter can send the image to any web browser.

To Access The Elmo Remotely:

1. **Point your web browser to http://142.58.249.92**

Since the Elmo Presenter can be controlled remotely, it is important for security reasons to turn the power off when it is not in use!!

Graphic 10: Elmo Presenter - Rear Panel

Software

Vidyo

P8445A is configured to support Vidyo video conferencing. The Windows computer has a complete Vidyo install and is configured to make use of the Sony HD camera at the front of the room and the microphones in the room.

In order to use Vidyo it is necessary to connect to a Vidyo collaboration portal. The two common Vidyo collaboration portals in use by SFU researchers are:

- the CERN Vidyo portal at https://vidyoportal.cern.ch/
- the WestGrid Vidyo portal at https://vidyo.westgrid.ca/

To use these portals it is necessary to have an account with the respective research organizations. For more information about using Vidyo with WestGrid please send an email to support@westgrid.ca. For more information about using the CERN Vidyo portal please contact vidyo-support@cern.ch.

To run Vidyo:

1. **Log in to the Windows computer (See Using the Computers above)**
2. **Start the Firefox browser**
3. **Navigate to one of the portals listed above.**
4. **Log in to Vidyo with your Vidyo account.**

By default, the Sony EVI HD camera should be routed to the Windows computer. If it isn't perform the following steps:

To route the HD Sony camera to the Windows computer:

1. **Press the *Tech* button on the Crestron control panel.**
2. **Press the button where the *Windows 1* and *Sony EVI* columns of the video matrix intersect.**

EVO

P8445A can provide EVO services. The audio from the wireless microphones should work seamlessly with EVO. The video cameras can also be used with EVO.

To run EVO:

3. **Log in to the Windows computer (See Using the Computers above)**
4. **Start the Firefox browser**
5. **Navigate to http://evo.caltech.edu/evoGate/**
6. **Click the Start button on the EVO Page – this will launch the EVO connection page.**
7. **Log in to EVO as you normally would**

By default, the Sony EVI HD camera should be routed to the Windows computer. If it isn't perform the following steps:

To route the HD Sony camera to the Windows computer:

1. **Press the *Tech* button on the Crestron control panel.**
2. **Press the button where the *Windows 1* and *Sony EVI* columns of the video matrix intersect.**

For far more detailed information on using EVO, visit the EVO documentation page at evo.caltech.edu/evoGate/Documentation

Skype

P8445A can provide Skype services. The audio from the wireless microphones and the Sony EVI HD camera should work seamlessly with the Skype software.

To run Skype:

1. **Log in to the Windows computer (See Using the Computers above)**
2. **Start up and log in to Skype as you normally would**

By default, the Sony EVI HD camera should be routed to the Windows computer. If it isn't perform the following steps:

To route the HD Sony camera to the Windows computer:

1. **Press the *Tech* button on the Crestron control panel.**
2. **Press the button where the *Windows 1* and *Sony EVI* columns of the video matrix intersect.**

Hardware

P8445a is made up of many types of equipment. Here is a list of the hardware and software capabilities of the room:

Audio / Visual

- 2 Sony Projectors capable of SXGA+ (1400x1050) resolution
- 1 Sony EVI HD PTZ Camera
- 1 x Elmo PTZ Camera
- Lifesize HD H323 unit
- Elmo Visual Presenter
- 3 wireless microphones (1 lapel, 2 tabletop)
- 2 ceiling mounted powered speakers
- Audio Echo Cancellation
- Audio Amplifier / Mixer
- HDMI digital video switch
- VGA computer video switch
- Composite video switch

Computers / Networking

- Windows Computer – Internet Connected
- Linux Computer – Internet Connected
- Wired and Wireless Router

Contact Information

Booking Assistance:

If you need to book Physics P8445a please contact Physics reception (physinfo@sfu.ca, (778) 782 4465).

Technical Assistance:

If you are having problems or need help setting up a meeting using the equipment in Physics P8445a please send email to ag-sfu@westgrid.ca.

If you need to talk to a person in an emergency, please contact, in order of priority/availability:

Brian Corrie
Visualization Coordinator - WestGrid
Room 10912.3 - Applied Sciences Building
778-782-6978
bcorrie@sfu.ca

Dugan O'Neil
Physics Department
Room P8460
778-782-5623
dugan_oneil@sfu.ca

General Information:

For general information about using P8445a please send an email to ag-sfu@westgrid.ca.